

REMARKS

Claims 1-16 were previously pending in this application. By this amendment, Applicant is canceling no claims. Claims 1, 7 and 11 have been amended. No new claims have been added. As a result claims 1-16 are pending for examination with claim 1 being an independent claim. No new matter has been added. The application as presented is believed to be in condition for allowance.

Summary of Telephone Conference with Examiner

Applicant thanks Examiner Nooristany for his time and courtesy during the telephone interview conducted on January 28, 2010 with the Applicant's representative Thomas McGinnis. During the interview, the patentability of the claims in light of the cited references was discussed. In particular, the Examiner and Applicant's representative discussed the differences between networks based on transparent bridging and source routing. In addition, the Examiner and Applicant's representative discussed potential amendments to claim 1 directed toward configuration of the root bridge identifier within the plurality of network forwarding devices. No agreement was reached regarding the patentability of the claims.

Rejections Under 35 U.S.C. §103

Claims 1-7, 9-11 and 13-16 are rejected under 35 U.S.C. §103(a) as being unpatentable over Mahajan, U.S. Patent No. 6,628,624 in view of Perlman (NPA – “Interconnections: Bridges and Routers”). In response, Applicant has amended claim 1 and requests reconsideration in light of the following comments.

Claim 1, as amended, is directed toward a method including “determining a root bridge identifier, the root bridge identifier being used as a root bridge identifier in a plurality of network forwarding devices, at least two of which are each coupled through a core network via at least one port and participate in a same spanning tree, wherein the at least one port does not run spanning tree protocol; and using, by the at least two of the plurality of network forwarding devices, the root bridge identifier before and after reconfiguration of the same spanning tree and without having to exchange the root bridge identifier in a network message.” As explained below, the proposed combination of Mahajan and Perlman fails to teach or suggest claim 1

because the proposed combination is improper and because the proposed combination fails to disclose the elements of claim 1.

Mahajan is directed toward a “method and apparatus [that] facilitates and enhances the operation of the spanning tree protocol” (Abstract). Mahajan discloses that “the enhanced spanning tree engine is configured to identify and block ports at which messages are looped-back to the transmitting port, thereby avoiding the creation of network loops” (Abstract). Mahajan also discloses that “the enhanced spanning tree engine rapidly transitions certain ports to a forwarding state to prevent associated applications from timing out and shutting down” (Abstract). In addition Mahajan discloses that “by executing the spanning tree algorithm, bridges elect a single bridge to be the ‘root’ bridge” (Col. 2, lines 21-23).

Perlman is directed toward “SR-TB” bridges that interconnect “transparent bridges” and “source routing bridges” (Page 107). Perlman discloses that SR-TB bridges can receive “spanning tree explorer” packets. Perlman also discloses that if “the SR-TB bridge receives a spanning tree explorer packet, it removes the source routing header when forwarding to ports into the TB portions of the network” (Page 109).

Applicant respectfully maintains the assertion that the proposed combination of Mahajan and Perlman is improper because Perlman explicitly teaches away from the use of SR-TB bridges. More particularly, Perlman discloses “SR-TB bridges have unsolvable problems (they function as ‘black holes’ when their caches have bad routes; their route find strategy must be compatible with all source routing end-system implementations)” (Page 110). Given this clear warning from Perlman against the use of SR-TB bridges, one of ordinary skill in the art would not choose to combined Perlman with Mahajan. Therefore the proposed combination of Mahajan and Perlman is improper and all rejections based on the improper combination should be withdrawn.

However, even if one were to combine the references as proposed, the proposed combination fails to disclose the act of “using, by the at least two of the plurality of network forwarding devices, the root bridge identifier before and after reconfiguration of the same spanning tree and without having to exchange the root bridge identifier in a network message” as required by claim 1. As acknowledged in the Office Action, “Mahajan is silent in terms ‘using, by the at least two of the plurality of network forwarding devices, the root bridge identifier without having to exchange the root bridge identifier in a network message’” (Page 3). Perlman

fails to cure this infirmity because Perlman is focused on SR-TB bridging and only discusses spanning tree protocol in relation to SR-TB bridging. As a result, Perlman fails to disclose of many the characteristics of a spanning tree protocol implementation and, in particular, makes absolutely no mention of a root bridge identifier, or a use thereof.

With reference to Perlman, the Office Action states “If the SR-TB bridge receives a spanning tree explorer packet, it removes the source routing header when forwarding to ports into the TB portions of the network ‘here is same as the root bridge identifier without having to exchange the root bridge identifier in a network message (as Mahajan discloses in Fig. 1’ (Page 10). In addition, the Office Action states “Perlman further discloses a technique wherein ‘it removes the source routing header when forwarding to ports into the TB portions of the network’ ‘header’ here is same as ‘the root bridge identifier’)” (Page 10). Applicant does not concede these analogies. However, even if one were to assume that the analogies are valid, neither Perlman nor Mahajan disclose use of “the root bridge identifier before and after reconfiguration of the same spanning tree and without having to exchange the root bridge identifier in a network message” as required by claim 1. In fact, as Mahajan clearly points out, with reference to FIG. 1, under a conventional approach of implementing the spanning tree algorithm, bridges “obtain the information necessary to run the spanning tree protocol” by exchanging “special messages called configuration bridge protocol unit (BPDU) messages” (Col. 2, lines 40-42). Nothing in Perlman cures this infirmity because Perlman offers no insight how spanning trees are initially configured or reconfigured. Without such a disclosure, one of ordinary skill in the art would conclude that Perlman follows this traditional approach. Therefore, the proposed combination of Mahajan and Perlman fails to render amended claim 1 obvious because the proposed combination is improper and because the proposed combination fails to teach or suggest, at least, “using, by the at least two of the plurality of network forwarding devices, the root bridge identifier before and after reconfiguration of the same spanning tree and without having to exchange the root bridge identifier in a network message.” Accordingly, withdrawal of the rejection of claim 1 is respectfully requested.

Claims 2-7, 9-11, 13-16 depend from independent claim 1 and are, therefore, allowable for at least the same reasons as independent claim 1. Accordingly, withdrawal of the rejection of claims 2-7, 9-11, 13-16 is respectfully requested.

Claims 8 and 12 stand rejected under 35 U.S.C. §103(a) as being obvious in view of Mahajan in combination with Perlman in further combination with U.S. Patent No. 6,879,594 to Lee (hereinafter Lee). In response, Applicant respectfully traverses this rejection and requests reconsideration in light of the following comments.

As discussed above, the proposed combination of Mahajan and Perlman is improper. Therefore, the proposed combination of Mahajan, Perlman and Lee is improper due to its inclusion of the improper Mahajan and Perlman combination. In addition, the Office Action does not assert that Lee cures the failure of Mahajan and Perlman to teach or suggest “using, by the at least two of the plurality of network forwarding devices, the root bridge identifier before and after reconfiguration of the same spanning tree and without having to exchange the root bridge identifier in a network message” as recited in independent claim 1 from which claims 8 and 12 depend. Consequently, the proposed combination of Mahajan, Perlman and Lee fails to render claims 8 and 12 obvious because the proposed combination is improper and because the proposed combination fails to disclose “using, by the at least two of the plurality of network forwarding devices, the root bridge identifier before and after reconfiguration of the same spanning tree and without having to exchange the root bridge identifier in a network message.” Accordingly, withdrawal of the rejection of claims 8 and 12 is respectfully requested.

CONCLUSION

In view of the foregoing amendments and remarks, reconsideration is respectfully requested. This application should now be in condition for allowance; a notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicant's attorney at the telephone number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee that is not covered by an accompanying payment, please charge any deficiency to Deposit Account No. 50/2762, Ref. E2003-701010.

Respectfully submitted,

Demetrios James Tsillas, Applicant

By: /Thomas J. McGinnis/
Thomas J. McGinnis, Reg. No. 58,026
Edward J. Russavage, Reg. No. 43,069
LANDO & ANASTASI, LLP
One Main Street
Cambridge, Massachusetts 02142
Telephone: 617-395-7000
Facsimile: 617-395-7070